



DEPARTMENT OF TRANSPORTATION

National Highway Traffic Safety Administration

[Docket No. NHTSA-2014-0096; Notice 2]

Tesla Motors, Inc. (Tesla), Grant of Petition for  
Decision of Inconsequential Noncompliance

**AGENCY:** National Highway Traffic Safety Administration (NHTSA),  
Department of Transportation (DOT).

**ACTION:** Grant of Petition.

**SUMMARY:** Tesla Motors, Inc. (Tesla) has determined that certain model year (MY) 2008 Tesla Roadster passenger cars do not fully comply with paragraph S4.4(c)(2), of Federal Motor Vehicle Safety Standard (FMVSS) No. 138, *Tire Pressure Monitoring Systems*. Tesla filed a report dated August 1, 2014, pursuant to 49 CFR Part 573, *Defect and Noncompliance Responsibility and Reports*. Tesla then petitioned NHTSA under 49 CFR part 556 requesting a decision that the subject noncompliance is inconsequential to motor vehicle safety.

**ADDRESSES:** For further information on this decision contact Kerrin Bressant, Office of Vehicles Safety Compliance, the National Highway Traffic Safety Administration (NHTSA), telephone (202) 366-1110, facsimile (202) 366-3081.

**SUPPLEMENTARY INFORMATION:**

**I. Overview:** Pursuant to 49 U.S.C. 30118(d) and 30120(h) and the rule implementing those provisions at 49 CFR Part 556, Tesla submitted a petition for an exemption from the notification and remedy requirements of 49 U.S.C. Chapter 301 on the basis that this noncompliance is inconsequential to motor vehicle safety.

Notice of receipt of the petition was published, with a 30-day public comment period, on June 24, 2015, in the **Federal Register** (80 FR 36403). No comments were received. To view the petition and all supporting documents log onto the Federal Docket Management System (FDMS) Web site at: <http://www.regulations.gov/>. Then follow the online search instructions to locate docket number "NHTSA-2014-0096."

**II. Vehicles Involved:** Affected are approximately 542 MY 2008 Roadster model passenger cars manufactured from February 1, 2008 through October 29, 2009.

**III. Noncompliance:** Tesla explains that if a fault is detected in a sensor, because the sensor is faulty, missing or unapproved, the Tire Pressure Monitoring System (TPMS) malfunction telltale will flash for 60 to 90 seconds and then remain continuously illuminated as required by FMVSS No. 138. However, the TPMS malfunction telltale fails to operate properly when a faulty, missing or unapproved sensor is detected and then the vehicle's ignition is cycled off and back on. In this

situation, the malfunction telltale in the subject vehicles does not re-illuminate immediately as required when the vehicle's ignition system is re-activated. Instead, the affected vehicles must reach a speed between 20 miles per hour (mph) and 25 mph for a maximum period of at least 90 seconds before the TPMS malfunction telltale re-illuminates.

**IV. Rule Text:** Paragraph S4.4(c)(2) of FMVSS No. 138 requires in pertinent part:

S4.4 TPMS Malfunction.

...

(c) *Combination low tire pressure/TPMS malfunction telltale.* The vehicle meets the requirements of S4.4(a) when equipped with a combined Low Tire Pressure/TPMS malfunction telltale that:

(2) Flashes for a period of at least 60 seconds but no longer than 90 seconds upon detection of any condition specified in S4.4(a) after the ignition locking system is activated to the "On" ("Run") position. After each period of prescribed flashing, the telltale must remain continuously illuminated as long as a malfunction exists and the ignition locking system is in the "On" ("Run") position. This flashing and illumination sequence must be repeated each time the ignition locking system is placed in the "On" ("Run") position until the situation causing the malfunction has been corrected. ...

**V. Summary of Tesla's Analyses:** Tesla stated its belief that the subject noncompliance is inconsequential to motor vehicle safety for the following reasons:

A) Tesla stated that although the TPMS malfunction indicator will not illuminate immediately after the

vehicle is restarted, it generally will illuminate shortly thereafter and in any event it will illuminate in no more than 90 seconds after the vehicle accelerates between 20 - 25 mph. Tesla further explained that additional warnings via the "fault" display in the dashboard and the auxiliary display warnings will appear anew. Clearing this "new" warning in the auxiliary screen will require the driver to "actively" (take positive action) to clear the screen. Tesla believes these additional steps required to clear the auxiliary screen warning ensures driver attention to the issue.

- B) Tesla states that they provide warnings and alerts above and beyond what is required by regulations. Checks include wheel sensor fitment (compatibility) and tire pressures. If sensors are "new" (i.e. different from those verified at the previous ignition cycle), the sensors are "learned" and after calibrations performed, a check of all tires is again performed for any low pressure conditions. In addition, the subject vehicles are equipped with an "auxiliary" screen which displays a diagram of the vehicle with respective tire positions and status of those respective tires. Tesla explained that this type

of detailed information and multiple alerts ensures the driver is well informed of a potential low tire pressure condition.

- C) Tesla said that the noncompliance is confined to one particular aspect of the functionality of the otherwise compliant TPMS malfunction indicator. All other aspects of the low-pressure monitoring system functionality are fully compliant with the requirements of FMVSS No. 138.
- D) Tesla stated that it is not aware of any customer complaints, field communications, incidents or injuries related to the failure of the TPMS noncompliance.

In summation, Tesla believes that the described noncompliance of the subject vehicles is inconsequential to motor vehicle safety, and that its petition, to exempt Tesla from providing recall notification of noncompliance as required by 49 U.S.C. 30118 and remedying the noncompliance as required by 49 U.S.C. 30120 should be granted.

**NHTSA'S DECISION:**

*NHTSA's Analysis:* Tesla explained that although the malfunction indicator does not re-illuminate immediately after the vehicle is restarted, it will illuminate shortly thereafter - within 90

seconds after the vehicle reaches a speed between 20 mph and 25 mph.

NHTSA recognizes that the malfunction indicator will not illuminate as required for very short periods of time - when the vehicle is traveling at low speeds and thus poses little risk to vehicle safety. Under normal driving conditions, a driver will begin a trip by accelerating moderately beyond 20-25 mph, and as explained by Tesla, once the vehicle accelerates above 20-25 mph, the malfunction indicator re-illuminates and then it will remain illuminated for the entire ignition cycle, regardless of vehicle speed. We understand the noncompliance will only occur in the very rare case where the driver begins a trip and never exceeds the 20-25 mph threshold, the speed required to re-activate the malfunction indicator. No real safety risk exists because at such low speeds there is little risk of vehicle loss of control due to underinflated tires. Furthermore, the possibility that the vehicle will experience both a low inflation pressure condition and a malfunction simultaneously is highly unlikely.

Tesla states that they provide warnings and alerts above and beyond what is required by regulations and that the subject vehicles are equipped with an "auxiliary" screen which displays a diagram of the vehicle with respective tire positions and status of those respective tires. Tesla explained that this type

of detailed information and multiple alerts ensures the driver is well informed of a potential low tire pressure condition.

The agency evaluated the displays Tesla uses in the noncompliant vehicles. In addition to the combination telltale indicator lamp, the subject vehicles are equipped with a "plan view" icon which displays the pressures for all four wheels individually. If any wheel has a malfunctioning pressure sensor the indicator for that wheel displays several dashes indicating that there is a problem with that respective wheel. The additional information is not required by the safety standard but can be used as an aid to the driver to determine the status of a vehicle's tires.

Tesla discussed that the noncompliance only involves one specific aspect of the malfunction functionality and that the primary function of the TPMS, identification of other malfunctions and of low inflation pressure scenarios, is not affected. Tesla explained that in the subject vehicles, the TPMS only fails to operate properly when a faulty, missing or non-approved sensor is detected and the ignition is recycled. According to Tesla, if such a fault is detected, and then the ignition is cycled off and back on, the MIL will reset, thus requiring the system to re-detect the fault or missing/unapproved sensor versus immediately re-illuminating the MIL from the previously detected fault.

The agency agrees with Tesla's reasoning that the primary function of the TPMS is to identify low tire inflation pressure conditions which Tesla's system does as required by the safety standard. There are a variety of other malfunctions that can occur in addition to the incompatible wheel/tire malfunction identified in this petition. We understand from Tesla that its TPMS will perform as required during all other type system malfunctions.

Tesla mentioned that they have not received or are aware of any consumer complaints, field communications, incidences or injuries related to this noncompliance. In addition to the analysis done by Tesla that looked at customer complaints, field communications, incidents or injuries related to this condition, NHTSA conducted additional checks of NHTSA's Office of Defects Investigations consumer complaint database and found no related complaints.

*NHTSA's Decision:* In consideration of the foregoing analysis, NHTSA has decided that Tesla has met its burden of demonstrating that the FMVSS No. 138 noncompliance is inconsequential to motor vehicle safety. Accordingly, Tesla's petition is hereby granted and Tesla is exempted from the obligation of providing notification of, and a remedy for, that the subject noncompliance under 49 U.S.C. 30118 and 30120.



NHTSA notes that the statutory provisions (49 U.S.C. 30118(d) and 30120(h)) that permit manufacturers to file petitions for a determination of inconsequentiality allow NHTSA to exempt manufacturers only from the duties found in sections 30118 and 30120, respectively, to notify owners, purchasers, and dealers of a defect or noncompliance and to remedy the defect or noncompliance. Therefore, this decision only applies to the subject nonconforming vehicles that Tesla no longer controlled at the time it determined that the noncompliance existed. However, the granting of this decision does not relieve vehicle distributors and dealers of the prohibitions on the sale, offer for sale, or introduction or delivery for introduction into interstate commerce of the noncompliant vehicles under their control after Tesla notified them that the subject noncompliance existed.

**Authority:** (49 U.S.C. 30118, 30120: delegations of authority at 49 CFR 1.95 and 501.8)

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Jeffrey M. Giuseppe, Director,  
Office of Vehicle Safety Compliance.

**Billing Code:** 4910-59-P

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